

Claims:

1. A fixed abrasive article comprising a three-dimensional abrasive composite in the form of abrasive composite elements, and further comprising a wear indicator.
2. The fixed abrasive article of claim 1 wherein the three-dimensional, fixed abrasive article is textured.
3. The fixed abrasive article of claim 1 comprising erodable abrasive composite elements.
4. The fixed abrasive article of claim 3 wherein the abrasive composite elements comprise a plurality of cylindrical posts.
5. The fixed abrasive article of claim 1 comprising a precisely-shaped abrasive composite.
6. The fixed abrasive article of claim 1 wherein the wear indicator comprises a visible marker in a binder.
7. The fixed abrasive article of claim 1 wherein the marker comprises a metallic material, a visible material, or a magnetic material.
8. The fixed abrasive article of claim 1 wherein the wear indicator comprises a colored marker.
9. The fixed abrasive article of claim 8 wherein the colored marker is chosen from the group consisting of a dye, a pigment, or a colorant.
10. The fixed abrasive article of claim 1 wherein the wear indicator comprises a visible marker contained in a binder.

11. The fixed abrasive article of claim 1 wherein the wear indicator comprises an abradable wear indicator coated on an abrasive surface of the fixed abrasive article.

12. The fixed abrasive article of claim 1 wherein the wear indicator comprises an abradable wear indicator embedded in an abrasive composite.

13. The fixed abrasive article of claim 1 wherein the wear indicator comprises a visible marker contained in a lower ten percent by height of an abrasive composite element.

14. The fixed abrasive article of claim 1 wherein the wear indicator comprises a wear indicator composite comprising a wear indicator and a binder adhered to a base, wherein upon contacting the substrate the wear indicator-composite element indicates contact between the wear indicator and the substrate.

15. The fixed abrasive article of claim 1 wherein the article comprises a fixed abrasive pad.

16. The fixed abrasive article of claim 1 wherein the article comprises a fixed abrasive belt.

17. A fixed abrasive article comprising posts having an inert chemical or mechanical indication to indicate post consumption.

18. The fixed abrasive article of claim 17 wherein the fixed abrasive article is a pad.